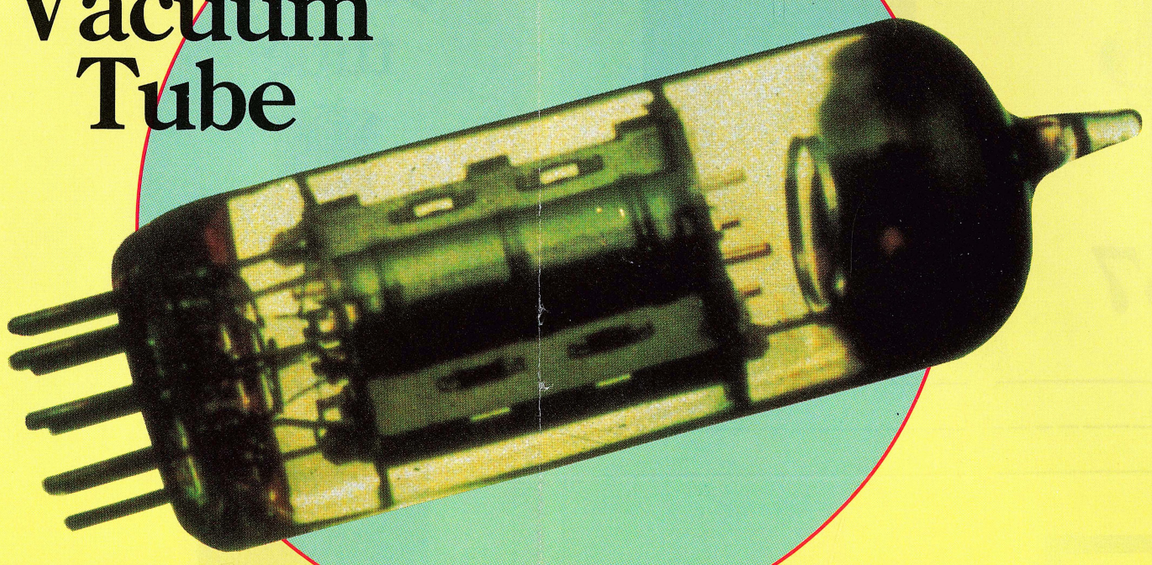
HISTORY OF ELECTRONIC COMPUTING

For the last 40 years, computers have run on electricity. The history of these electronic computers has been shaped by three important inventions: vacuum tubes, transistors, and microchips.

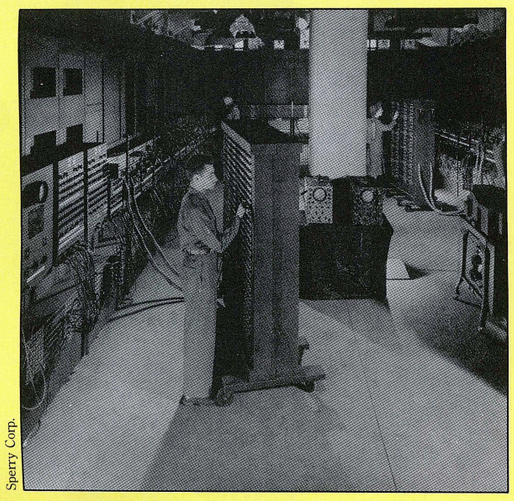
1946 Vacuum Tube



A vacuum tube was about the size of a pickle. Inside each tube was a tiny pathway called a circuit. It carried electricity.

The electricity in vacuum tubes was used to run the first electronic computer in 1946. The computer was called ENIAC and had 18,000 vacuum tubes.

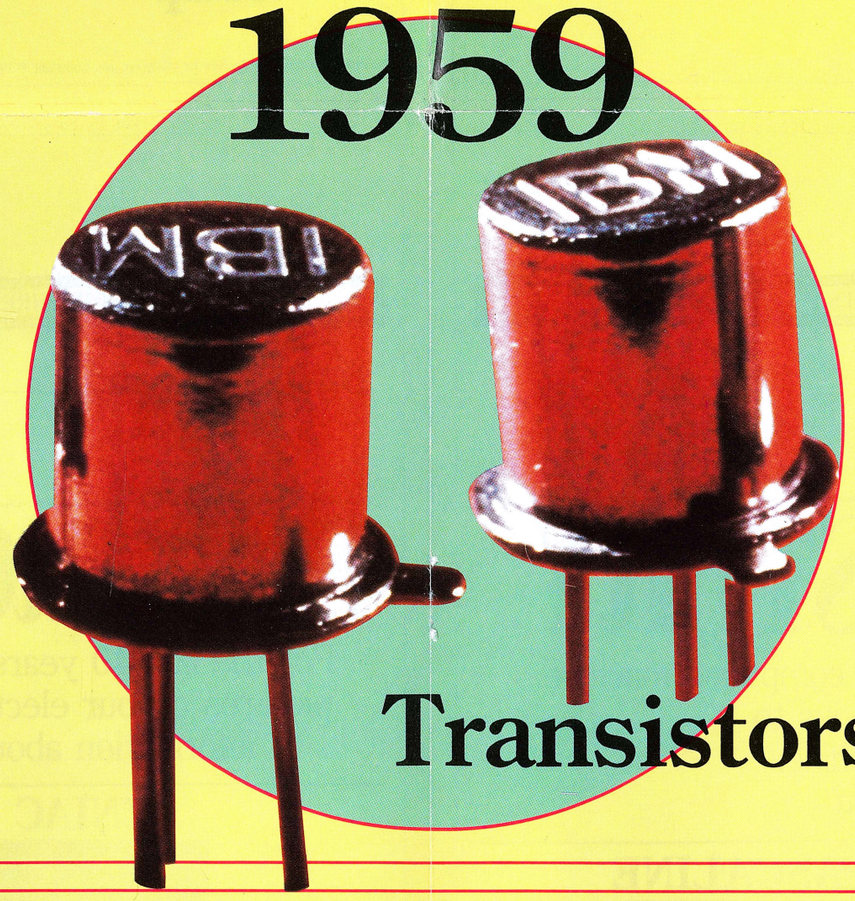
ENIAC weighed 30 tons and filled the floor space of an average classroom. It could do 5,000 additions per second.



Sperry Corp.

ENIAC

1959 Transistors



Transistors were invented in the late 1950s. Like vacuum tubes, they carried electricity through circuits.

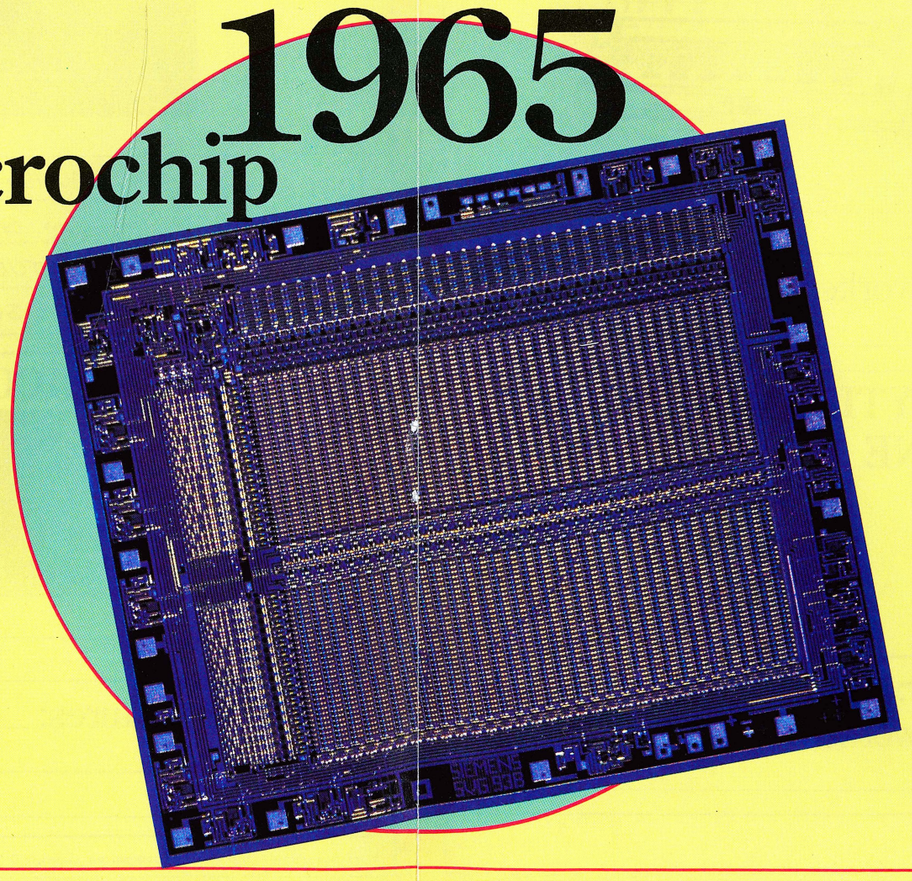
Transistors were smaller than vacuum tubes. Each was about the size of a large paper clip. Because of this smaller size, computers with transistors could be made smaller. They also worked thousands of times faster than computers with vacuum tubes because electricity did not have to travel as far in the transistors.

Computers that used transistors were called minicomputers. In most cases, a minicomputer could fit in a clothes closet.

Honeywell

Minicomputer

1965 Microchip



In the 1960s, scientists discovered a way to put the circuits contained in many transistors onto one tiny board no bigger than a postage stamp. The board was called an integrated circuit or a microchip. Computer makers began using integrated circuits instead of transistors in the 1970s.

Computers that use microchips are called microcomputers. Most microcomputers are about the size of a typewriter. They can do more than a billion additions per second.

Richard Hutchings

Microcomputer

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Photos courtesy of IBM.

PRIMARY

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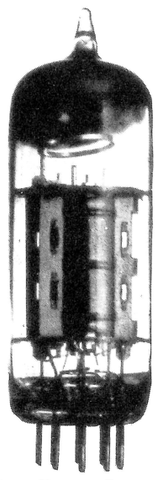
NAME: _____

NAME THE COMPUTER PARTS

Look at the pictures below.
Each picture shows a computer part and the date it was first made.
Write the name of each part on its line.
Use the Word Box to help you.

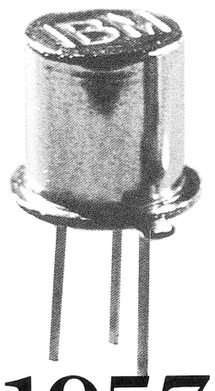


1946

_____

_____

_____

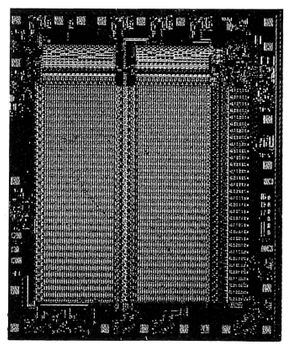


1957

_____

_____

_____



1965

_____

_____

_____

WORD BOX
chip
transistor
tube

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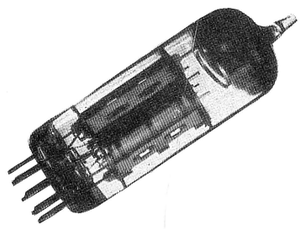
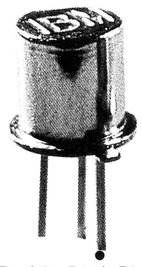
COMPUTER MATCH

Draw a line from each computer part on the left to its machine on the right. Color the pictures.

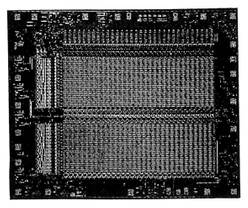
PART:



tube



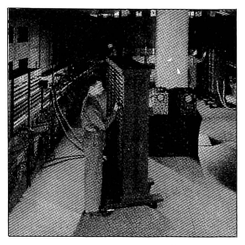
transistor



chip

MACHINE:

microcomputer



ENIAC

minicomputer

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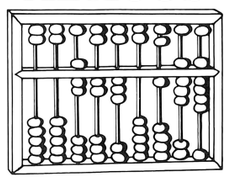
EARLY COMPUTER HISTORY

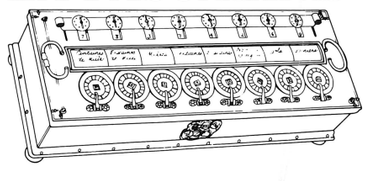
Each box below contains a picture of an early computing machine.
Use the encyclopedia or other books to
find information about each machine.
The first one is done for you.

ABACUS



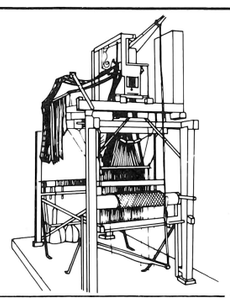
Date: AROUND 2600 BC.
Inventors: CHINESE AND EGYPTIANS
How it worked: BEADS WERE MOVED UP AND DOWN RODS TO ADD AND SUBTRACT.

LA PASCALINE



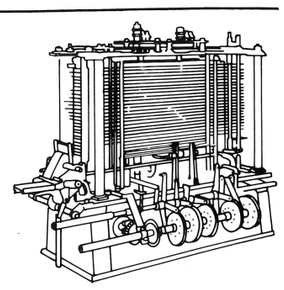
Date: _____
Inventor: _____
How it worked: _____

JACQUARD'S LOOM



Date: _____
Inventor: _____
How it worked: _____

ANALYTICAL ENGINE



Date: _____
Inventor: _____
How it worked: _____

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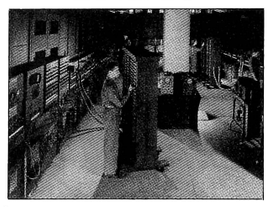
HISTORY OF ELECTRONIC COMPUTERS

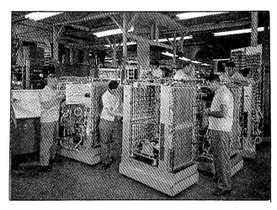
For the last 40 years, computers have run on electricity. Below are pictures of four electronic computers. Use reference books to fill in information about each one. The first one is done for you.

ENIAC



Date: 1946
Inventors: JOHN MAUCHLY & JOHN ECKERT
Important Features: GOT ITS POWER FROM 18,000 VACUUM TUBES. COULD DO 5,000 ADDITIONS PER SECOND.

UNIVAC



Date: _____
Inventors: _____
Important Features: _____

CDC 1604 MINICOMPUTER

Date: _____
Inventor: _____
Important Features: _____

APPLE II MICROCOMPUTER

Date: _____
Inventor: _____
Important Features: _____

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